



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,190	07/26/2001	Yoaz Daniel	13750.3US01	7093
27148	7590	03/30/2005	EXAMINER	
POLSINELLI SHALTON WELTE SUELTHAUS P.C. 700 W. 47TH STREET SUITE 1000 KANSAS CITY, MO 64112-1802			ABELSON, RONALD B	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/916,190	DANIEL ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Ronald Abelson	2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 26 July 2001.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-13 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 26 July 2001 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/04 and 8/03.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 7, 8, and 13 rejected under 35 U.S.C. 102(b) as being anticipated by Natarajan (US 5,742,594).

Regarding claims 1, 7, and 13, Natarajan teaches a method and apparatus for a method for allocating resources in a cellular network (fig. 1).

Natarajan teaches continuously measuring approximate available bandwidth within at least one shared media in said cellular network ("T(k)", col. 3 lines 41-42).

Natarajan teaches continuously measuring the demand for bandwidth within said at least one shared media (col. 4 lines 1-3), for at least two service classes (CBR, VBR-RT, col. 4 lines 1-3).

Natarajan teaches automatically changing bandwidth allocations for each of said at least two service classes in accordance with at least one value from said continuously measured approximate available bandwidth and at least one value

from said continuously measured demand for bandwidth (CBR, VBR-RT, fig. 3, col. 4 line 66 - col. 5 line 11).

Regarding claims 7 and 13, in addition to the limitations previously listed, a storage medium and a processor (fig. 1 box 14, 16, microcomputer, col. 3 lines 37-40).

Regarding claims 2 and 8, setting bandwidth allocations (CBR, VBR-RT, fig. 3, col. 4 line 66 - col. 5 line 11).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Art Unit: 2666

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan as applied to claims 2 and 8 above, and further in view of Patel (US 6,850,764).

Natarajan is silent on creating sectors of guaranteed bandwidth.

Patel teaches creating sectors of guaranteed bandwidth (col. 13 lines 48-51).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Natarajan by reserving a minimum bandwidth for each class. This would improve the system by ensuring that lower class traffic is serviced during peak traffic time periods.

6. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Natarajan and Patel

as applied to claims 3 and 9 above, and further in view of Ramamurthy (US 6,850,764).

The combination is silent on creating supplements of non-guaranteed bandwidth for each of said sectors.

Ramamurthy teaches creating supplements of non-guaranteed bandwidth for each of said sectors (col. 5 lines 12-16). Note, the examiner corresponds the applicant's supplements of non-guaranteed bandwidth for each of said sectors with the difference between the Ramamurthy's maximum bandwidth per class and Patel's minimum bandwidth per class.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Natarajan and Patel by setting a maximum bandwidth per class for each class. This would improve the system by ensuring that the higher priority traffic does not take the entire available bandwidth allocation during peak traffic time periods.

7. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan as applied to claims 2 and 8 above, in view of Patel and further in view of Ramamurthy Natarajan is silent on creating sectors of guaranteed bandwidth.

Patel teaches creating sectors of guaranteed bandwidth (col. 13 lines 48-51).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Natarajan by reserving a minimum bandwidth for each class. This would improve the system by ensuring that lower class traffic is serviced during peak traffic time periods.

The combination of Natarajan and Patel is silent on creating supplements of non-guaranteed bandwidth for each of said sectors.

Ramamurthy teaches creating supplements of non-guaranteed bandwidth for each of said sectors (col. 5 lines 12-16). Note, the examiner corresponds the applicant's supplements of non-guaranteed bandwidth for each of said sectors with the difference between the Ramamurthy's maximum bandwidth per class and Patel's minimum bandwidth per class.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of Natarajan and Patel by setting a maximum bandwidth per class for each class. This would improve the system by ensuring that the higher priority traffic does not take the entire available bandwidth allocation during peak traffic time periods.

Art Unit: 2666

8. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan as applied to claim 1 above, and further in view of Mishra (US 5,805,599).

Natarajan is silent on automatically changing bandwidth allocations includes tuning said bandwidth allocations. The examiner defines "tuning said bandwidth allocations" as the current bandwidth allocation is based upon prior bandwidth allocations. In the specification, in "tuning" allocations are determined based upon past allocations. See pg. 17 wherein  $S_n$  is a function of  $S_o$  and  $T_n$  is a function of  $T_o$ ).

Mishra teaches automatically changing bandwidth allocations includes tuning said bandwidth allocations (col. 1 lines 31-34).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Natarajan by allocating a class's current bandwidth levels based upon past allocations if the prior timeslot the class did not have any data to transmit. This can be accomplished by following the teachings of Mishra. This would improve the system by keeping the allocation levels more stable over time. This will help to prevent large fluctuations in allocation levels.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronald Abelson  
Examiner  
Art Unit 2666

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600